

PATENT  
Docket No. C 2064 PCT/US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re: Application of Weuthen, et al.

Serial No. 10/088,260

Examiner: Necholus Ogden, Jr.

Filed: 06/25/2002

Art Unit: 1751

TITLE: DETERGENT TABLETS

CERTIFICATE OF MAILING

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Rose A. Stowe

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Board of Patent Appeals and Interferences  
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In response to the Official Action of November 2, 2006, Applicants herewith

submit an Appeal Brief in compliance with 37 CFR 41.37(c).

The additional material appears at page 5, line 13 of the brief.

Favorable consideration is requested.

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DEC 08 2006

TC 1700

Respectfully submitted,

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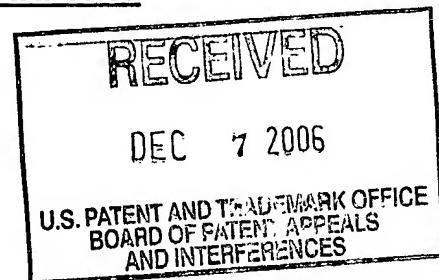
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Appellants herewith submit a Brief on Appeal from the Examiner's Final Rejection dated November 28, 2005 rejecting claims 11-13, 15-23 and 25-30, all of the claims pending in the application.

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AND INTERFERENCES  
AUGUST 2006

REAL PARTY IN INTEREST

The real party in interest is Cognis Deutschland GmbH, a German company

having a place of business at Henkelstrasse 67, 40589 Duesseldorf, Germany.

RELATED APPEALS AND INTERFERENCES

Appellants are not aware of any appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board of Patent Appeals and Interferences' decision in the pending appeal.

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STATUS OF CLAIMS

TC 1700

Claims 1-10, 14 and 24 have been canceled. Claims 11-13, 15-23 and 25-30 are pending in the application. All of the pending claims are the subject of this appeal.

STATUS OF AMENDMENTS

All amendments submitted during prosecution of the application have been entered. No amendment has been filed subsequent to final rejection.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The application is directed to a detergent tablet (claim 11) and a process for making a solid form detergent tablet (claim 21). The concept is supported at page 1, lines 2-4 and line 26. The tablet is readily soluble under washing conditions, has

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adequate chemical resistance and provides laundry with an excellent soft feel (page 1, line 26 through page 2, line 3).

The detergent tablet comprises:

- (a) a surfactant component selected from a group consisting of anionic surfactants, nonionic surfactants, amphoteric surfactants and mixtures thereof;
- (b) a non-enzymatic protein and/or derivative thereof in an amount of from 0.1% to 10% by weight based on the weight of the tablet;
- (c) a zeolite; and
- (d) a disintegrating agent.

(See page 2, lines 6-11; and the examples, page 32, Table 1).

The non-enzymatic protein and/or derivative thereof in an amount of from 0.1% to 10% by weight based on the weight of the detergent tablet is supported at page 8, line 29 through page 10, line 3. The non-enzymatic hydrolyzed proteins are not surfactants (see page 9, lines 13-15). The amount of non-enzymatic proteins or derivative thereof in the detergent tablet is from 0.1% to 10% by weight based on the weight of the detergent tablet (see page 10, line 2, 3).

The detergent tablets contain zeolites (see page 10, lines 5-26). The detergent tablets contain disintegrating agents (see page 10, line 28 through page 11, line 20).

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Claim 12 is directed to a detergent tablet in which the surfactant component is present in an amount of from 1 to 50% by weight based on the weight of the detergent tablet (see page 8, lines 25, 26).

Claim 13 is directed to the detergent tablet in which the surfactant component is present in an amount of 5 to 25% by weight based on the weight of the detergent tablet (see page 8, line 25).

Claim 15 is directed to the tablet of claim 11 wherein the non-enzymatic protein is present in an amount of from 1 to 8% by weight based on the weight of the detergent tablet (see page 10, line 2).

Claim 20 is directed to a detergent tablet free of cationic surfactant (see page 2, line 23).

Claim 21 is directed to a process for making a solid-formed detergent tablet which imparts a soft feel onto clothes treated therewith (page 2, lines 2-19 and page 32, Table 1). The method comprises providing components a-d of claim 11, mixing (a)-(d) to form a detergent mixture and forming the detergent mixture into a tablet (see page 30, line 6 through page 32 and Table 1). The surfactant component is present in the tablet in an amount of from about 5 to 25% by weight based on the weight of the detergent tablet or from about 1 to 50% by weight based on the weight of the detergent tablet and preferably at 10% to 20% by weight of the detergent tablet (see page 8, lines 24-26). The non-enzymatic protein can be present in the detergent tablet in an amount of from 1 to 8% by weight based on the weight of the detergent tablet (see page 10, line 2). The zeolite can be present in the detergent tablet in an amount of from about 10 to 60% by weight and more preferably from about 20 to 40% by weight based on the weight of the detergent tablet (see page 10, lines 24-26 and page 32, Table 1).

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The disintegrating agent is present in the detergent tablet in an amount of from 0.1 to 25% by weight and more preferably from about 1 to 20% by weight based on the weight of the detergent tablet (see page 11, lines 18-20).

The detergent tablet is free of cationic surfactant (see page 2, line 23).

The detergent tablets of the invention are environmentally friendly and provide laundry with a soft feel (see page 1, line 27 through page 2, line 3; and line 16-23). The protein derivatives are the protein hydrolyzates and protein hydrolyzate fatty acid condensation products (see page 9, lines 9-30).

**GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Does Lang et al. (US 6,051,544) provide a *prima facie* case of obvious on which a rejection under 35 USC 103(a) can be based?

**ARGUMENT**

The present invention is a detergent tablet comprising:

- (a) a surfactant component selected from the group consisting of anionic surfactants, nonionic surfactants, amphoteric surfactants and mixtures thereof;
- (b) a non-enzymatic protein and/or derivative thereof in an amount of from 0.1% to 10% by weight, based on the weight of the tablet;
- (c) a zeolite; and
- (d) a disintegrating agent.

When utilized to wash fabrics, the non-enzymatic protein or a derivative thereof provides a softness to the washed fabric and acts as a substitute for a cationic

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surfactant in the detergent composition. The preferred non-enzymatic proteins (protein hydrolyzates) are not considered surfactants in the art.

The claims stand rejected under 35 USC 103(a) over Lang et al. (US 6,051,544). Appellants submit that Lang et al. neither teaches nor suggests the present invention.

At column 1, lines 37-45, Lang et al. teaches that the object of the invention is to provide solid secondary alkanesulfonates (SAS hereinafter) in finely divided form which can be homogenously incorporated directly as a surfactant component into pulverulent detergent and cleaning product compositions without agglomeration, or which can be further processed in the usual manner together with components customary in detergent and cleaning product compositions to give solid extrudates, pressed articles or compacts.

The non-agglomerating SAS of Lang et al. is formed by grinding coarse pulverulent SAS with additives which coat the surface of the SAS particles to prevent them from agglomerating.

Nowhere in Lang et al. is there any teaching or suggestion that a disintegrator be included in the detergent composition to provide rapid disintegration to the article prepared from the detergent formulation. Appellants therefore respectfully submit that there is neither teaching nor suggestion in Lang et al. to include a disintegrator in compositions formulated utilizing the SAS surfactant composition.

The additive utilized to coat the SAS particles to prevent agglomeration, can include cellulose and derivatives thereof such as carboxymethyl cellulose, methyl

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cellulose and hydroxyethyl cellulose. These compositions are noted in the present application as useful as a disintegrator. However, they are not utilized as a disintegrator in the Lang et al. reference but are used to provide a non-agglomerating coating on the SAS pulverulent material. In the Lang et al. reference there is no distinction made between the various additives for the SAS except that they provide the non-agglomeration effect to the SAS particles. The described uses for the additive treated SAS include articles such as solid extrudates, washing bars, bar soaps or toilet blocks to give pressed articles e.g., tablets, or compacts (rolls). The products disclosed in Lang et al. would not require a disintegrator since the SAS particles do not stick together because of the nonhydroscopic coating on the particles. In addition, the coating additive is not distributed throughout the particles but is present only on the surface of particles which can be 3 mm in diameter.

Incorporating a disintegrator in the Lang et al. composition, would produce articles which would have no utility. Clearly, one skilled in the art would understand that solid extrudates such as washing bars, bar soaps or toilet blocks which contained a disintegrator would be useless. Washing bars, bar soaps and toilet blocks are intended for long periods of use in contact with water. If the washing bars, bar soaps or toilet blocks contained a disintegrator, when they were in use such as placed in a toilet where they are constantly contacted with water (in the water tank) or are contacted with running water when the toilet is flushed, or washing bars or bar soaps which are contacted with water during their use would have relatively short lives (minutes or

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seconds) after contact with water during use. Articles of this type containing a disintegrator would be useless and not commercially viable. Appellants therefore respectfully submit that Lang et al. would not teach or suggest to one skilled in the art to include a disintegrator in the detergent composition. The cellulose and cellulose derivatives could be particularly useful as an additive for the SAS when the SAS was to be included in a pulverulent detergent composition.

At col. 6, lines 38-45, Lang et al. teaches that the protein hydrolyzates useful in the practice of the invention are nonionic surfactants. As set forth in the present application, the protein hydrolyzates useful in the present invention are not surfactants (page 9, lines 13-15).

Lang et al. is also deficient in teaching that the detergent composition can contain cationic surfactants: The detergent tablets of the present invention do not contain cationic surfactants. In fact, claims 20 and 30 are specifically directed to cationic surfactant-free detergent tablets. Appellants submit that there is neither teaching nor suggestion in Lang et al. that cationic surfactants have any deleterious effect on detergent tablets.

Lang et al. presents an extensive listing of components which can appear in detergent compositions along with the additive treated SAS. However, nowhere in the long list of components for additives for the SAS particles or composition for a detergent formulation is there a suggestion that any of the components act as a disintegrator in the composition. As stated above, a disintegrator would be useless and detrimental to

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the properties of the articles intended to be made utilizing the additive treated SAS components of Lang et al.

Lang et al. contemplates converting pulverulent or granular SAS according to the invention directly to solid extrudates, such as washing bars, bar soaps or toilet blocks, to give pressed articles, e.g. tablets, or compacts (rolls) without any additional components (see col. 3, lines 8-13). This composition of Lang et al. would not contain any of the additional materials which are generally utilized to form detergent compositions. Apparently, the additive treated SAS can be utilized without additional components for solid articles.

Lang et al. presents a long list of possible components for detergent compositions but provides no examples of detergent formulations outside of the additive treated SAS which is useful alone. There does not appear to be any indication of amounts of the various detergent components which would appear in a detergent formulation outside of the additive treated SAS. There is neither teaching nor suggestion of the amount of the additive treated SAS which would appear in a detergent formulation or any relationship between the amount of the SAS and the listing of other surfactants which can appear in the detergent formulation. One skilled in the art would receive as much knowledge about detergent formulations from Lang et al. as they would receive by consulting McCutcheons or other lists of detergent components.

Appellants respectfully submit that Lang et al. is deficient as a reference since there is neither teaching nor suggestion of a detergent tablet containing (a) a surfactant

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component; (b) non-enzymatic proteins; (c) zeolites and (d) disintegrating agents. In particular, Appellants submit that Lang et al. is completely silent concerning including in the detergent composition a disintegrating agent. Appellants submit therefore that Lang et al. neither teaches nor suggests the composition of claim 11 or the process of claim 21 for making a detergent tablet.

Lang et al. is deficient in neither teaching nor suggesting a detergent tablet containing from 0.1 to 10% by weight of a non-enzymatic protein, a zeolite, a disintegrating agent and from about 1 to 50% by weight of the surfactant component as claimed in claims 12 and 22.

Claims 13 and 23 are not obvious over the teachings of Lang et al. since Lang et al. is completely silent concerning a detergent tablet containing from 0.1 to 10% by weight of a non-enzymatic protein, a zeolite, a disintegrating agent and a surfactant in an amount of from 5 to 25% by weight of the tablet.

Claims 15 and 25 are not obvious over the teachings of Lang et al. since there is neither teaching or suggestion in Lang et al. to provide a detergent tablet containing from 1 to 8% by weight of a non-enzymatic protein along with surfactants, zeolites and the disintegrator.

Claims 16 and 26 are not obvious over the teachings of Lang et al. since Lang et al. is completely silent concerning a detergent tablet containing surfactants, from 0.1 to 10% by weight of non-enzymatic proteins, a disintegrator and from 10 to 60% by weight of zeolite.

Claims 17 and 27 are not obvious over the teachings of Lang et al. since Lang et al. is completely silent concerning a detergent tablet containing surfactants, from 0.1 to 10% by weight of non-enzymatic proteins, the disintegrator and 20 to 40% by weight of zeolite.

Claims 18 and 28 are not obvious over the teachings of Lang et al. since Lang et al. is completely silent concerning a detergent tablet containing surfactants, 0.1% to 10% by weight of non-enzymatic protein, zeolite and a disintegrating agent in an amount of 0.1 to 25% by weight of the tablet.

Claims 19 and 29 are not obvious over the teachings of Lang et al. since Lang et al. is completely silent concerning a detergent tablet containing surfactants, 0.1 to 10% by weight of a non-enzymatic protein, zeolites and a disintegrating agent in an amount of from 1 to 20% by weight of the tablet.

Appellants further submit that Lang et al. is deficient in neither teaching or suggesting a composition of claims 20 and 30 wherein the tablet is free of cationic surfactant.

#### **SUMMARY**

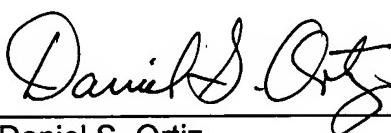
For the reasons set out above, Appellants respectfully submit that Lang et al. does not teach or suggest the detergent tablet of the present invention. Appellants submit that Lang et al. is completely silent concerning a detergent tablet containing a disintegrator, from 0.1 to 10% by weight of a non-enzymatic protein or derivative thereof and the amounts of zeolite and surfactant in the detergent tablet of the present

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invention. Lang et al. does not provide a *prima facie* case of obviousness on which a rejection under 35 U.S.C. 103(a) can be based.

For the reasons set out supra, Appellants respectfully request that the Honorable Board of Patent Appeals and Interferences reverse the Examiner.

Respectfully submitted,

  
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DSO/ras

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**APPENDIX**

**CLAIMS ON APPEAL**

Claim 11: A detergent tablet comprising:

- (a) a surfactant component selected from the group consisting of an anionic surfactant, a nonionic surfactant, an amphoteric surfactant, and mixtures thereof;
- (b) a non-enzymatic protein and/or derivative thereof in an amount of from 0.1% to 10% by weight, based on the weight of the tablet;
- (c) a zeolite; and
- (d) a disintegrating agent.

Claim 12: The composition of claim 11 wherein the surfactant component is present in the tablet in an amount of from about 1 to 50% by weight, based on the weight of the tablet.

Claim 13: The composition of claim 11 wherein the surfactant component is present in the tablet in an amount of from about 5 to 25% by weight, based on the weight of the tablet.

Claim 15: The composition of claim 11 wherein the non-enzymatic protein is present in the tablet in an amount of from about 1 to 8% by weight, based on the weight of the tablet.

Claim 16: The composition of claim 11 wherein the zeolite is present in the tablet in an amount of from about 10 to 60% by weight, based on the weight of the tablet.

Claim 17: The composition of claim 11 wherein the zeolite is present in the tablet in an amount of from about 20 to 40% by weight, based on the weight of the tablet.

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Claim 18: The composition of claim 11 wherein the disintegrating agent is present in the tablet in an amount of from about 0.1 to 25% by weight, based on the weight of the tablet.

Claim 19: The composition of claim 11 wherein the disintegrating agent is present in the tablet in an amount of from about 1 to 20% by weight, based on the weight of the tablet.

Claim 20: The composition of claim 11 wherein the tablet is free of cationic surfactant.

Claim 21: A process for making a solid-form detergent tablet which imparts a soft feel onto clothes treated therewith comprising:

- (a) providing a surfactant component selected from the group consisting of anionic surfactants, nonionic surfactants, amphoteric surfactants, and mixtures thereof;
- (b) providing a non-enzymatic protein and/or derivative thereof in an amount of from 0.1% to 10% by weight based on the weight of the tablet;
- (c) providing a zeolite;
- (d) providing a disintegrating agent;
- (e) mixing (a)-(d) to form a detergent mixture; and
- (f) forming the detergent mixture into a tablet.

Claim 22: The process of claim 21 wherein the surfactant component is present in the tablet in an amount of from about 1 to 50% by weight, based on the weight of the tablet.

Claim 23: The process of claim 21 wherein the surfactant component is present in the tablet in an amount of from about 5 to 25% by weight, based on the weight of the tablet.

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Claim 25: The process of claim 21 wherein the non-enzymatic protein is present in the tablet in an amount of from about 1 to 8% by weight, based on the weight of the tablet.

Claim 26: The process of claim 21 wherein the zeolite is present in the tablet in an amount of from about 10 to 60% by weight, based on the weight of the tablet.

Claim 27: The process of claim 21 wherein the zeolite is present in the tablet in an amount of from about 20 to 40% by weight, based on the weight of the tablet.

Claim 28: The process of claim 21 wherein the disintegrating agent is present in the tablet in an amount of from about 0.1 to 25% by weight, based on the weight of the tablet.

Claim 29: The process of claim 21 wherein the disintegrating agent is present in the tablet in an amount of from about 1 to 20% by weight, based on the weight of the tablet.

Claim 30: The process of claim 21 wherein the tablet is free of cationic surfactant.

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**EVIDENCE APPENDIX**

**None**

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**RELATED PROCEEDINGS APPENDIX**

**None**